



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

RBIR7028-3
Job Sheet 196185



Part No: RBIR7028-3

Job Qty: ~~3 pcs~~ 9 pcs

Part Name: Remover / Installer



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 6/7/19

Job Tracking No:

Due Date: 7/23/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBIR7### Rev. 0 IPP Rev. A 18.06.04 new issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
110	SL-154 - 1	3 pcs	7/23/19	7/23/19	1.00	0.75	SL-154 - 1		19/02/03
120	QC 2	3 pcs	7/23/19	7/23/19	0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		19/02/03
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 57		
							QC 2 - 62		
							QC 2 - 63		
							QC 2 - 8		
							QC 2 - 66		
							QC 2 - 64		
							QC 2 - 65		



Container No: S195624



Part: RBIR7028-3

Job No: 196185

Serial No/Batch: S195624

Revision: 0

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 07/03/19

6/7/2019

[Dart Hawkesbury] Job Sheet - Lajeunesse, Marie

130 QC 8	3 pcs	7/23/19	0.00 0.00	QC 2 - 5	
				QC 2 - 71	
				QC 2 - 73	
				QC 2 - 69	
				QC 8 - 12	
				QC 8 - 14	
				QC 8 - 17	
				QC 8 - 20	
				QC 8 - 25	
				QC 8 - 3	
				QC 8 - 32	
				QC 8 - 33	
				QC 8 - 35	
				QC 8 - 39	
				QC 8 - 4	
				QC 8 - 44	
				QC 8 - 45	
				QC 8 - 49	
				QC 8 - 58	
				QC 8 - 8	A. 19-07-05
				QC 8 - 9	
				QC 8 - 68	
				QC 8 - 67	
				QC 8 - 1 (A)	
				QC 8 - 47	
				QC 8 - 40	
				QC 8 - 52	
				QC 8 - 23	
				QC 8 - 57	
150 Outsource - 12 - Black Oxide	3 pcs	7/23/19	0.00 0.00	GROO2	A 2019-07-10
160 Packaging 2-1 - Receive - B4B	2 pcs	7/23/19	0.00 0.00	Packaging 2 - 1 - B4B	
				Packaging 2 - 2 - B4B	
				Packaging 2 - 3 - B4B	
				Packaging 2 - 5 - B4B	
				Packaging 2 - 4 - B4B	
				Packaging 2 - 6 - B4B	
				Packaging 2 - 7 - B4B	
				Packaging 2 - 8 - B4B	
				Packaging 2 - 9 - B4B	
				Packaging 2 - 10 - B4B	
				Packaging 2 - 11 - B4B	
				Packaging 2 - 12 - B4B	
				Packaging 2 - 13 - B4B	
				Packaging 2 - 14 - B4B	
				Packaging 2 - 15 - B4B	
				Packaging 2 - 16 - B4B	
				Packaging 2 - 17 - B4B	
				Packaging 2 - 18 - B4B	
				Packaging 2 - 19 - B4B	
				Packaging 2 - 20 - B4B	
				Packaging 2 - 21 - B4B	
				Packaging 2 - 22 - B4B	
				Packaging 2 - 23 - B4B	
				Packaging 2 - 24 - B4B	
				Packaging 2 - 25 - B4B	
				Packaging 2 - 26 - B4B	
				Packaging 2 - 27 - B4B	
				Packaging 2 - 28 - B4B	
				Packaging 2 - 29 - B4B	

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				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
170 QC 6	3 pcs	7/23/19	0.00 0.00	QC 6 - 9	
				QC 6 - 68	DAS
				QC 6 - 61	61
				QC 6 - 40	9-89
180 Packaging 3-1 - Stock - B4B	3 pcs	7/23/19	0.00 0.00	Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	DAS
				Packaging 3 - 6 - B4B	28
				Packaging 3 - 7 - B4B	9-89
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
190 QC 21 - SA	3 pcs	7/23/19	0.00 0.00	QC 21 - SA - 21	DAS
				QC 21 - SA - 70	21 JUL 23 2019
				QC 21 - SA - 53	9-89
Part Op 110 - SL-154 (MORI SL-154 LATHE)1-Machine as per DWG. FC254 FOLIO REV: _____ DWG REV: _____ Descriptions: _____ 2-Debur 120 - (QC2- Inspect parts off machine FAI/FAIB) 130 - (QC8- Inspect parts - second check) Engrave T/N and/or P/N number using MARKTRONIC engraver as per DWG. 150 - (Outside Processing - Black Oxide)-Issue P/O to GROUPE ALTECH; PO 43957 -Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF-16173 Grade 3 Class 1 or MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Material type; 4140 -Certificate of Conformity is required 160 - (Receive & Inspect for Damage & Mat'l Certs) 170 - (QC6- All purchased or subcontracted products) 180 - (Identify as per dwg & Stock Location: _____) 190 - QC21- Final Inspection - Work Order Release)					

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M17-4-H900-R1.000	17-4 SS H900 Round Bar 1.00"	.2670 ft (.089 ea)	110-SL-154 - 1	5093068

MT-4/40QT-R1.000

Job Allocations

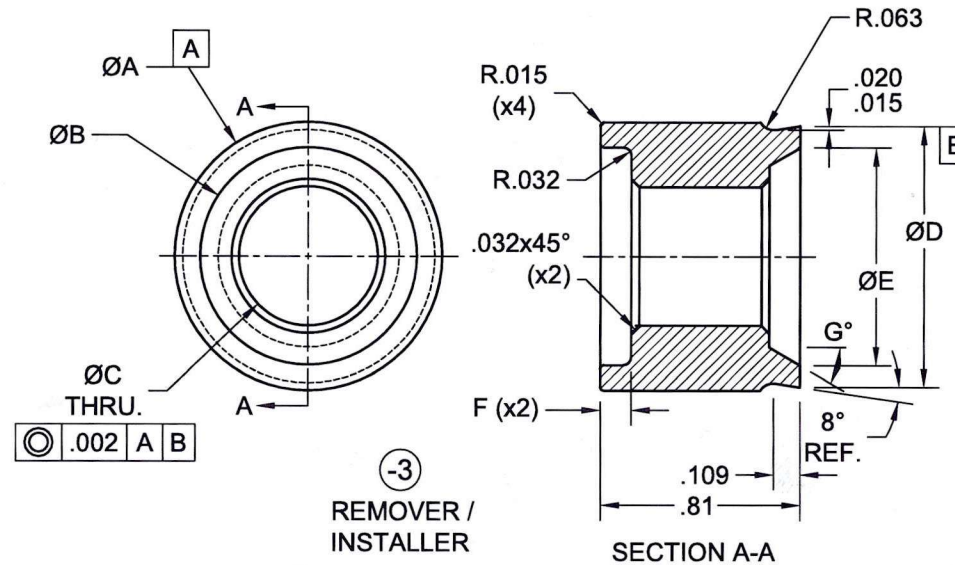
Operation	Component Part	Required	Inventory	Allocated
110-SL-154 - 1	M17-4-H900-R1.000	0	27	0

Part Specifications

Specifications could not be found.

Plex 6/7/19 1:30 PM Dart.lajeunesse.marie

REVISIONS			
REV	DESCRIPTION	DATE	INITIAL
-	-	-	-



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 196185 MWS
190607

TOOL #	BRG. OD.	ØA + .000 - .004	ØB + .005 - .005	ØC + .003 - .000	ØD + .003 - .003	ØE + .003 - .003	F + .010 - .010	G° + .5 - .5	MATERIAL	SPECIFICATIONS
RBIR7028	.9375	.929	.797	.313	.890	.787	.270	25°	4140 Q&T	Ø1 x 1

RED BARN MACHINE	
TITLE PORTABLE BEARING INSTALL & REMOVAL TOOLS; REMOVER/INSTALLER	
DWG NO. CHARTED TOOL No. -3	REV -
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON:	
DECIMALS .XXX ± .005	FRACTIONS ± 1/32
.XX ± .01	ANGLES ± .5°
X ± .1	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE NTS	DATE 10-22-10
SHEET 3 of 5	
DRAWN BY: PERRITT	
APPROVED	
HEAT TREAT	
FINISH SPEC BLACK OXIDE	
USED ON BEARING	
SEE CHART	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

INSPECTION SHEET[illegible]

Engineering Approval: (If necessary)		Date:	
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Rev	Date	Change	Revised by	Approved
B	14.07.31	New Issue	KJ	



Dart Aerospace Ltd.
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K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043957



Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

Attention: Grenon, Sylvie

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB043957
PO Date: 7/9/19
Due Date: 7/17/19
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Phone:

Via: Ground
Pymt Terms: Net 60

Freight Terms:
Special Comments:

E-MAILED
2019-07-19

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	R197342	RBE350A94-3700-C-01	Tube -Issue P/O; -Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF-16173 Grade 3 Class 1 or MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Material type; A513 -Certificate of Conformity is required	Firmed	-	7/17/19	7 pcs	0 pcs	7 pcs	\$0.01/pcs	\$0.07
2	195959	RB877206-5-1	Shaft Outsource12 (Outside Processing - Black Oxide) 1- Issue P/O to Groupe Altech; PO 2- Black oxide finish, MIL-C-13924C Class 1 3- Certificate of Conformity is required	Firmed	-	7/17/19	8 pcs	0 pcs	8 pcs	\$2.25/pcs	\$18.00



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PURCHASE ORDER

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Items												
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price	
3	195944	RBD29905-11	Short Center Pin (Outside Processing - Black Oxide) -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	-	7/17/19	8 pcs	0 pcs	8 pcs	\$1.75/pcs	\$14.00	
							8 X JUL 22 2019					
4	195945	RBD29905-13	Long Center Pin -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	-	7/17/19	8 pcs	0 pcs	8 pcs	\$1.90/pcs	\$15.20	
							8 X JUL 22 2019					
5	196129	RBE350A94-2706-00-01	Pin -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	-	7/17/19	32 pcs	0 pcs	32 pcs	\$2.50/pcs	\$80.00	
							32 X JUL 22 2019					
6	196184	RBIR7028-1	Receiver (Outside Processing - Black Oxide) -Issue P/O to GROUPE ALTECH; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF-16173 Grade 3 Class 1 or MIL-c-81309 Type III or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Material type; 1018 -Certificate of Conformity is required	Firmed	-	7/17/19	9 pcs	0 pcs	9 pcs	\$3.40/pcs	\$30.60	
							9 X JUL 22 2019					



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PURCHASE ORDER

POHB043957



Items												
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price	
7	196185	RBIR7028-3	Remover / Installer (Outside Processing - Black Oxide)-Issue P/O to GROUPE ALTECH; PO _____ -Black oxide finish, MIL- C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF- 16173 Grade 3 Class 1 or MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Material type; 4140 -Certificate of Conformity is required	Firmed	-	7/17/19	9 pcs	0 pcs	9 pcs	\$2.35/pcs	\$21.15	
8	196186	RBIR7028-5	Alignment Seat (Outside Processing - Black Oxide) -Issue P/O to GROUPE ALTECH; PO _____ -Black oxide finish, MIL- C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF- 16173 Grade 3 Class 1 or MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Material type; 4140 -Certificate of Conformity is required	Firmed	-	7/17/19	9 pcs	0 pcs	9 pcs	\$2.80/pcs	\$25.20	
Grand Total:											\$204.22	



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PURCHASE ORDER

POHB043957



Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 7/19/19 11:00 AM Dart.Guerin.Kimberley



Certificat de Conformité / Certificate of Compliance

(020660-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupealtech.com

Bon de Livraison / Packing Slip

020660 - 1

Livré à / Ship to

DART AEROSPACE LTD

1270 ABERDEEN STREET

HAWKESBURY, ON, K6A1K7

CANADA

Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD

1270 ABERDEEN STREET

HAWKESBURY, ON, K6A1K7

CANADA

BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
19-Jul-2019		Jigar Patel		POHB043957 ✓				
#Ligne Line#	No. de Série / # Pièce Part Number /Line Item Details	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
✓ 1	RBE350A94-3700-C-01 REWORK Rev.	RBE350A94-3700-C-01 REWORK SAND BLAST ALL OVER BLACK OXIDE MIL-C-13924C, CLASS 1 APPLY THIN LAYER OF OIL /CPC PER MIL-PRF-16173 GRADE 3 CLASS 1 OR MIL-C-81309 TYPE3 OR MILL-C23411A OR MIL-PRF-81309 AND WIPE OF EXCESS	BLACK-OXIDE N/C	7	7 ✓	0	0	0
✓ 2	RB877206-5-1 Rev.	RB877206-5-1 SAND BLAST ALL OVER OXIDE BLACK [OXIDE BLACK] MIL-C-13924C CLASS 1	OXIDE-BLACK CH	8	8 ✓	0	0	0
✓ 3	RBD29905-11 Rev.	RBD29905-11 SAND BLAST ALL OVER OXIDE BLACK [OXIDE BLACK] SPÉC: MIL-C-13924C, CLASS 1 ***	BLACK-OXIDE CH	8	8 ✓	0	0	0
✓ 4	RBD29905-13 Rev.	RBD29905-13 SAND BLAST ALL OVER OXIDE BLACK [OXIDE BLACK] SPÉC: MIL-C-13924C, CLASS 1 ***	BLACK-OXIDE CH	8	8 ✓	0	0	0
✓ 5	RBE350A94-2706-00-01 Rev.	RBE350A94-2706-00-01 SAND BLAST ALL OVER OXIDE BLACK [OXIDE BLACK] MIL-C-13924C CLASS 1	OXIDE-BLACK CH	32	32 ✓	0	0	0
✓ 6	RBIR7028-1 Rev.	RBIR7028-1 SAND BLAST ALL OVER OXIDE-BLK & OIL [OXIDE BLACK AND OIL] APPLY THIN LAYER OF OIL /CPC PER MIL-PRF-16173 GRADE 3 CLASS 1 OR MIL-C-81309 TYPE3 OR MILL-C23411A OR MIL-PRF-81309 AND WIPE OF EXCESS	OXIDE-BLACK CH	9	9 ✓	0	0	0
✓ 7	RBIR7028-3 Rev.	RBIR7028-3 SAND BLAST ALL OVER OXIDE-BLK & OIL [OXIDE BLACK AND OIL] APPLY THIN LAYER OF OIL /CPC PER MIL-PRF-16173 GRADE 3 CLASS 1 OR MIL-C-81309 TYPE3 OR MILL-C23411A OR MIL-PRF-81309 AND WIPE OF EXCESS	OXIDE-BLACK CH	9	9 ✓	0	0	0

DAS
61
9-88

RECEIVED

JUL 19 2019

DART AEROSPACE LTD.

DAS
61
9-88

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JUL 19 2019

DART AEROSPACE LTD.



Certificat de Conformité / Certificate of Compliance

(020660-1)

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 www.groupaltech.com

Bon de Livraison / Packing Slip

020660 - 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.		Bon de commande Client Customer Purchase Order No.				
19-Jul-2019		Jigar Patel			POHB043957				
#Ligne Line#	No. de Série / # Pièce Part Number /Line Item Details	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Quantités / Quantities Qté NC/ NC Qty		Qté Scrap/	À venir / Back Order
8	RBIR7028-5 Rev.	RBIR7028-5 SAND BLAST ALL OVER OXIDE-BLK & OIL [OXIDE BLACK AND OIL] APPLY THIN LAYER OF OIL /CPC PER MIL-PRF-16173 GRADE 3 CLASS 1 OR MIL-C-81309 TYPE3 OR MILL-C23411A OR MIL-PRF-81309 AND WIPE OF EXCESS	OXIDE-BLACK CH	9	9	0		0	0

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

J. J. 344

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.